

Session 1

Build the bookends

Today we prepare the braces that shape the soundboard near the beginning of the build - and make the bridge that brings the strings to life near the end.

Today's finish line

Each builder leaves with a complete, labeled set of top-brace stock and a bridge blank shaped through the class-approved jig sequence.



The destination: a completed pineapple tenor ukulele.

WHERE TODAY'S WORK FITS

1. Brace stock + bridge

2. Plates + bend sides

3. Assemble body

4. Fit supplied neck

5. Bridge + setup

6. Finish + first strum

WORKING STOCK

Top, back, and side stock:

5 in x 32.5 in x 0.17 in

127 x 825.5 x 4.32 mm

Keep paired pieces together and mark the intended face, grain direction, and centerline before cutting.

CLASS RHYTHM

- Brief tool or jig demonstration.
- Work with your build buddy.
- Measure, check, then cut.
- Stop at each checkpoint.
- Label every finished part.

OPERATION A

Plane the top-brace stock

Brace stock starts square, straight, and consistent. Later, these pieces will be laid out on the soundboard, glued flat in the go-bar deck, then carved and tapered.



Go-bars apply even pressure during brace glue-up.



Completed top bracing: the destination for today's brace stock.

ROUGH DIMENSIONS - PINEAPPLE TENOR TOP

PART	QTY.	INCHES (W X L X T)	METRIC (W X L X T)
Upper transverse brace (UTB)	1	1/4 x 6.25 x 3/8	6.4 x 158.8 x 9.5 mm
Main transverse brace (MTB)	1	1/4 x 8.25 x 3/8	6.4 x 209.6 x 9.5 mm
Fan braces	3	1/8 x 5.5 x 7/32	3.2 x 139.7 x 5.6 mm
Soundhole reinforcements*	2	3/16 x 3.25 x 2 mm	4.8 x 82.6 x 2 mm
Bridge plate*	1	1-1/8 x 5 x 3/32	28.6 x 127 x 2.4 mm

*Cut from spruce top offcuts. Dimensions are rough stock; final fitting and shaping happen later.

SEQUENCE

1. Read the grain and mark orientation.
2. Square one reference face and edge.
3. Use the planing jig to approach width and thickness.
4. Check along the full length - not only at the ends.
5. Cut to rough length and label each part.

CHECKPOINT

- ☐ Faces are flat; edges are square.
- ☐ Dimensions are consistent end to end.
- ☐ No severe grain runout or splits.
- ☐ Every piece is labeled.

INSTRUCTOR INSERT: BRACE-PLANING JIG

Add jig photo, setup dimensions, plane direction, stops, and the specific “stop and ask” checkpoint after the instructor supplies them.

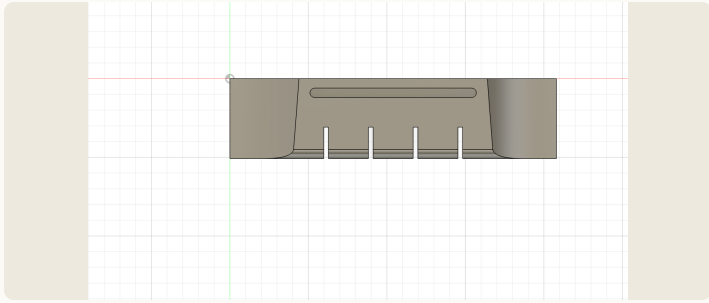
OPERATION B

Make the Martin-style bridge

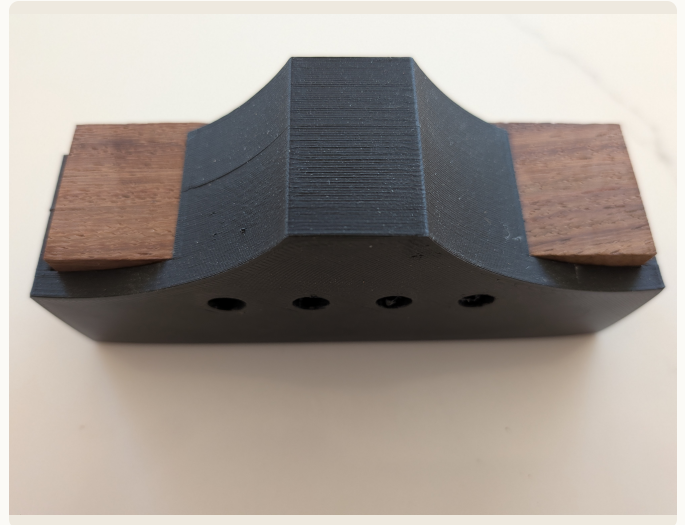
The class bridge is a compact “slots-n-knots” tie-bar design modeled on traditional Martin ukulele bridges. Each string passes through a drilled hole and a narrow slot to the rear edge; its knot seats in that slot. It uses no bridge pins and no center tie channel.

STARTING MATERIAL

Bridge blank: 1 in wide x 5/16 in thick. The closed-end saddle chamber has already been cut on the CNC.



Class bridge, top view: closed-end saddle chamber above; four string slots open to the rear edge below.



Blank seated in the jig, ready for drilling and wing shaping.

Orientation checkpoint - stop before drilling. Keep the CNC-cut saddle chamber facing up. Seat the blank fully with its rear (string-knot) edge toward the jig's drill-guide holes. Compare it with the CAD view and instructor's sample; have your buddy verify it. Reversing the blank puts the string holes on the wrong side of the saddle chamber.

This differs from the Oaktown plan. Oaktown uses a traditional tie bridge with a 1/4 in center channel and angled holes that tie off inside it. This class design follows the lighter Martin-style arrangement: four holes, four rear-edge slots, and knots seated in those slots.

Tool stop: Do not use the drill press, bandsaw, handsaw, or shaping tools until the instructor has demonstrated the jig, guards, hand position, and work sequence.

Next: Follow the jig-supported workflow on the next page. The instructor will demonstrate every powered-tool setup before use.

Drill, slot, and shape the bridge

Three jigs keep the sequence repeatable: the black 3D-printed jig for sizing, squaring, drilling, and wing layout; the dedicated bandsaw jig for the four string slots; and the 4 in spindle for shaping the wings.

Tool stop: Do not use the drill press, bandsaw, or spindle sander until the instructor has demonstrated the matching jig, guards, hand position, and work sequence.

1 Size and square. Use the 3D-printed jig as a reference while bringing the blank to a snug, square fit.

2 Identify. Find the CNC-cut saddle chamber; mark the top, gluing face, and rear edge.

3 Load and check. Seat the blank with the rear edge toward the drill guides. Buddy-check before drilling.

4 Drill and slot. Drill through the four guides with a 1/4 in bit, or the next size down approved by the instructor. Use the dedicated bandsaw jig to cut each hole through to the rear edge. The instructor will demonstrate it.

5 Shape. Use the jig profile and the 4 in diameter spindle on the spindle sander to establish the bridge wings; then refine the curves and bevels.

6 Finish-check. Confirm symmetry, clean holes and string slots, an undamaged saddle chamber, and a flat gluing surface.

BEFORE DRILLING

- ☐ Blank is fully seated and square.
- ☐ Saddle chamber faces up.
- ☐ Rear edge meets the drill-guide side.
- ☐ Buddy and instructor approve.

BEFORE STORING

- ☐ Holes and slots are clean.
- ☐ Wings are symmetrical.
- ☐ Saddle chamber is undamaged.
- ☐ Gluing face is flat; bag is labeled.

Read the jig and the string path



The jig does three jobs: its straight edges help size and square the stock, its four holes guide the string holes, and its curved shoulders establish the bridge-wing profile.

HOW THE STRING IS SECURED

1. Tie a stopper knot at the string end.
2. Lead the string through its rear-edge slot.
3. Seat the knot at the drilled hole.
4. Carry the string forward across the saddle.

This is the “slots-n-knots” arrangement: no bridge pin and no shared tie channel.



Finished reference: symmetrical wings, four clean rear-edge string slots, and a saddle seated in its own closed-end chamber.

FINISHED BRIDGE CHECK

- ☐ Four holes and rear-edge slots are clean.
- ☐ Wings match and flow smoothly.
- ☐ Saddle chamber is undamaged.
- ☐ Gluing face is flat; storage bag is labeled.

Do not force a poor fit. If the blank rocks, binds, or leaves a visible gap in the jig, remove it and correct the stock before drilling. The jig is a reference, not a clamp.

WRAP-UP

Buddy-check, label, and look ahead

BEFORE YOU LEAVE

- ☐ Count and identify all brace pieces and the bridge plate.
- ☐ Compare key dimensions with your buddy.
- ☐ Write your name on the brace bundle and bridge container.
- ☐ Record anything that still needs correction.
- ☐ Store parts flat, dry, and protected.

BUILD LOG

What worked well today?

What should I check before the next operation?



Much later: bridge location masked before finishing. Today's bridge waits until the body and neck establish its exact location.

WATCH THE COMPLETE BUILD

Make a Ukulele at home | Build from scratch | Hand-made pineapple tenor Ukulele

A first-time builder follows the same Oaktown Strings pineapple tenor plan. Use it to preview the full sequence or revisit a step after class.

<https://www.youtube.com/watch?v=fSsfNltTWeo>

NEXT SESSION

Prepare the top and back plates, transfer the patterns, and begin the simplified side-bending workflow.

COURSE SIMPLIFICATIONS

The instructor supplies the neck and fretboard. Rosette, binding, neck construction, and CNC inlay are optional advanced work.

References: Oaktown Strings, *Pineapple Tenor Ukulele*, version 1.3 (Robert Lattuga, 2020), plus archived construction instructions; [Got A Ukulele: Martin T1 StreetMaster Tenor](#); [Unofficial Martin Guitar Forum: Ukulele bridge design](#). Photos and CAD view by the instructor.